REMARKS

Reconsideration of the rejection of all claims is respectfully requested, in view of the above amendments and the following remarks.

Claim Amendments

Claims 11 and 12 have been cancelled as being in a "use" format that is not acceptable under U.S. practice. This cancellation is without waiver or prejudice to applicant's right to claim any subject matter thereof in this or any continuing application. Claims 2-7 have been amended with respect to dependency only, in order to overcome improper multiple dependencies. New method of treatment claims 13 to17 have been added, as discussed further below. Support for these new claims is found, *inter alia*, at page 32, line 3 through page 33 line 21. Clearly no new matter is added by these amendments, and entry thereof is respectfully requested. Following entry of these amendments, claims 1-10 and 13 - 17 remain pending in this application.

Claim Objections

The above amendments correct all improper multiple dependencies. Therefore all grounds for this objection have been overcome.

Claim Rejections – 35 USC § 112, 2nd Paragraph

Three numbered grounds for rejection of claims 1-12 have been advanced under *35* USC § 112, second paragraph.

Ground 1 asserts that the phrase "wherein the values of R^2 may be same or different" in claim 1 renders this and all dependent claims indefinite as it is not clear what "values" are being referred to. This ground for rejection is respectfully traversed. The intended meaning of the phrase would clearly be understood by a person skilled in the art, and even if there was a possible doubt as to its meaning, such doubt certainly would be dispelled by the consistent use of this phrasing throughout the specification.

Thus, the Examiner's attention is respectfully called to fact that, throughout the entire specification and claims, the different groups or moieties recited for the compound variables are referred to as "values." See, for example, the following recitations in the claims:

Page	Line	Recitation
2	19	with respect to $(R^2)_m$, following a detailed recitation of permissible values for the variable R^2, the specification notes that "m is 0-5; wherein the values of R^2 may be the same or different;"
2	26	with respect to $(R^1)_n$, following a detailed recitation of permissible values for the variable R^1, the specification notes that "n is 0 to 2, wherein the values of R^1 may be the same or different;"
3	3	with respect to $(R^3)_p$, following a detailed recitation of permissible values for the variable R^3, the specification notes that "p is 0-4; wherein the values of R^3 may be the same or different"
3	22	with respect to $(R^4)_q$, following a detailed recitation of permissible values for the variable R^4, the specification notes that "q is 0-2; wherein the values of R^4 may be the same or different"

In each instance the permissible values for each variable R^1, R^2, R^3 and R^4 are specifically defined, and the permissible number of such variable that may be present in the compound is set by the definition of n, m, p and q. In any instance where the compound has more than one of a given variable, each value of that variable may be the same or different from others of

such variable in that compound. Thus, with reference to claim 1 for example, if m is 3 and one R^2 is halo, the second and/or third R^2 may also be halo, or may be any other value defined in claim 1 for R^2.

It is not seen how this phrase could be interpreted in any other way, particularly in light of the clear and consistent use of this phrase throughout the specification. The phrase is quite definite and would be so understood by persons skilled in this art. Therefore, it is respectfully requested that this ground for rejection be withdrawn.

Ground 2 asserts that the recitation of "*in vivo* hydrolysable ester" is deemed as indefinite. The Examiner appears to acknowledges that the phrase "*in vivo* hydrolysable ester" is "not ambiguous and is acceptable" in the sense that it refers to compounds which undergo *in vivo* hydrolysis. As best can be understood, however, the rejection arises out of the definition of the various substituent groups R^1, R^2, R^3 and R^4, which the Examiner characterizes as including "such groups, namely esters, alkoxycarbonyl, carbamates etc. which are also in vivo hydrolysable and therefore it is not clear what is the difference between these variable groups and the 'in vivo hydrolysable ester' groups," which "renders these claims ambiguous."

This ground for rejection is respectfully traversed, in that no ambiguity or indefiniteness is seen.

In vivo hydrolysable esters, in the context of a pro-drug, are discussed in the specification beginning at page 6, line 11, for example, compounds of formula (I) containing a carboxy or hydroxy group in the form of a pharmaceutically acceptable ester which is hydrolysed in the human or animal body to produce the parent acid or alcohol. Persons skilled in the art, particularly when guided by the specification disclosure, would be quite

capable of determining an appropriate ester-forming substituent, and the carboxy or hydroxy group within the compound on which to form the ester, for their intended objective.

Even if one or more of the substituents defined by R^1, R^2, R^3 and R^4 might itself be *in vivo* hydrolysable (which apparently is the Examiner's concern), it is not seen how this would introduce any ambiguity into the claim. A compound having the specifically recited substituents would come within the scope of the claim, whether or not any such substituent is *in vivo* hydrolysable. The recitation of "or an *in vivo* hydrolysable ester thereof" is an additional optional characteristic that may be present in a claimed compound. Persons skilled in this art would understand this recitation as encompassing the circumstance wherein a compound *otherwise falling within the scope of the claims* is in the form of an *in vivo* hydrolysable ester of that compound, which could be broken down by hydrolysis in the animal to the claimed parent acid or alcohol compound. In other words, the *in vivo* hydrolysable ester form would constitute a pro-drug. This may be viewed as being somewhat analogous to the also frequently used expression "pharmaceutically acceptable salt," by which the scope of a claim is not avoided by converting a claimed compound into a salt form.

The Examiner also notes at the end of this ground 2 rejection that the "removal of protecting groups in claim 9 is also indefinite, as it is not clear what are these protective groups and how they differ from the above said groups." Again, this further ground for rejection is respectfully traversed. Persons skilled in the art are well aware of the function of protecting groups when making a compound, and would have no difficulty identifying appropriate protecting groups and appropriate means for their removal, particularly in light of the detailed discussion of protecting groups and their removal in the specification at page 26,

line 14 through page 27, line 19. Nothing more is required, and it seems entirely immaterial whether or not such a protected substituent might also be *in vivo* hydrolisable.

In view of the above, it should be clear that a person skilled in the art would understand whether a given compound (or process for making) fell within the scope of these claims with respect to both the *in vivo* hydrolysable ester and the removal of a protecting group. Nothing more is required by section 112, second paragraph. It is therefore respectfully requested that this ground for rejection be withdrawn.

Ground 3 notes that claims 11[1] and 12 are in "use" form, which is not accepted under U.S. practice. This ground has been obviated by the cancellation of claims 11 and 12, without waiver or prejudice to applicant's right to pursue any subject matter thereof in other claims of this or a continuing application.

Claim Rejections – 35 USC § 112, 1st Paragraph

Claims 11 and 12 have also been rejected under 35 USC § 112, 1st paragraph as not being enabled. As noted above, these claims have been cancelled as being in an improper "use" form, and this ground for rejection has therefore been obviated. Thus there is no need to contest or further comment on this additional ground for rejection.

[1] It will be assumed that the reference to claim 1 in this ground 3 rejection was refer to claim 11, since the explanation of this ground has no applicability to claim 1.

Claim Rejections – 35 USC § 101

Claims 11 and 12 have also been rejected under 35 USC § 101 because they are in a "use" form that is not acceptable under U.S. practice. Inasmuch as these claims have been cancelled for the reasons noted above, this ground for rejection also has been obviated.

New Claims

New method of treatment claims 13 through 17 have been added by the above amendments. These claims find support throughout the specification and, in particular, at page 32, line 3 through page 33 line 21.

Claim 13 recites a method for producing an anti-cancer effect in a warm blooded animal in need thereof by administering an effective amount of a claimed compounds to such animal. This claim is fully supported by the specification disclosure, particularly at page 32, lines 11-26. Moreover, the Examiner has acknowledged at page 3 of the present Action that the specification is "enabling for treating cancer."

Claim 14 recites a method for producing an anti-proliferative effect in a warm blooded animal in need thereof by administering an effective amount of a claimed compound to such animal. See, in particular, the specification at page 1, lines 23-29, noting the recognized association between a cell cycle kinase inhibitor, such as the presently claimed compounds, and anti-cell-proliferation properties.

Claim 15 recites a method for producing a CDK2 inhibitory effect in a warm blooded animal in need thereof by administering an effective amount of a claimed compound to such animal. Claim 16 recites a method for treating a disease or medical condition mediated in whole or in part by CDK2 by administering to a warm blooded animal in need thereof a

CDK2 inhibitory effective amount of a claimed compound. See, in particular, specification page 32, lines 3-9. Claim 17 is dependent on claim 16, and further recites that the disease or medical condition is a cancer selected from solid tumours and leukemias. Specific support for claim 17 is found, *inter alia*, in the specification at page 32, lines 9-26. Again, it is noted that the Examiner has recognized at page 3 of the present Action that the specification is enabling for treating cancer.

Method of treatment claims in the above formats are specifically sanctioned by the Patent Office, and in particular by the current Revised Interim Utility Guidelines and Training Materials available, *inter alia*, on the PTO website. The Examiner specifically cited these Guidelines at page 4 of the present Action with respect to the section 112, paragraph 1 rejection of claims 11 and 12. Although discussion of the Examiner's comments thereon extending from page 3 to page 6 of the Action was obviated by the cancellation of these "use claims," a discussion of certain aspects of those comments as applicable to new method claims 13-17 may be helpful in advancing the prosecution of this application.

In particular, Example 8 of the Utility Guidelines: Training Examples, entitled "'Therapeutics' Not Associated with a Disease" authorizes claims very similar to present claims 13-17. A copy of relevant portions of the Training Examples is attached for the Examiner's convenience, specifically pages 1-2 and 45-49. As will be explained further below, even though these Utility Guidelines are focused on the utility requirements of sections 101 and 112, second paragraph, they necessarily are also relevant to enablement of this form of claim.

At page 45 of the Training Materials, Example 8 is set out for analysis. The assumed specification content and claim wording used for the analysis are as follows:

Specification: Compound A is disclosed to inhibit enzyme XYZ, a well-known enzyme which is a member of the family of tyrosine kinase, *in vitro*. The specification states that compound A can be used to treat diseases caused or exacerbated by increased activity of enzyme XYZ. No actual diseases are named.

Claims:

1. Compound A.

2. A method of treating a disease caused or exacerbated by increased activity of enzyme XYZ consisting of administering an effective amount of compound A to a patient.

Although the Training Materials focus on utility, the "analysis" makes clear that both claims 1 and 2 are of an acceptable format and content *in all respects*, provided that at least one disease condition that is treatable by the claimed method is identified in the specification or known in the art.

The Training Materials initially assume that "no actual diseases are named" in the specification. Since claim 2 is directed to a method of using the compound of claim 1, the analysis first considered the utility of claim 1. The analysis notes that XYZ is a well-known tyrosine kinase enzyme, and the substrate for the enzyme and the reaction which the enzyme catalyzes are also well known. Since the specification discloses that compound A will inhibit enzyme XYZ *in vitro*, claim 1 was found to meet the utility requirements, even though no actual diseases treatable by the inhibition of enzyme XYZ are named in the specification. (Training Materials page 45).

However, method claim 2 was *initially* found to be rejectable under section 101 and section 112, first paragraph. As discussed in paragraph 4) at pages 46-47 of the Training Materials, since neither the specification nor the art of record disclose any diseases or conditions caused or exacerbated by enzyme XYZ, the asserted utility essentially is a method of treating an unspecified, undisclosed disease or condition, which does not define a "real world" context of use. The paragraph continues, "treating an unspecified, undisclosed disease or condition would require or constitute carrying out further research to identify or reasonably confirm a 'a real world' context of use." Based on these assumptions it is concluded at the top of page 47 that claim 2 should be rejected under both section 101 and section 112, first paragraph.

However, the Training Materials at page 47 then proceed to itemize situations under which the rejections should be withdrawn. In the first situation set out in paragraph (1), the examiner is instructed to withdraw the rejections of claim 2 under section 101 and 112, first paragraph, if applicant provides a reference published before the filing date of the application which teaches that certain dieseases are associated with increased activity of enzyme XYZ.

If an applicant can overcome the rejections by citing a published reference identifying a single specific disease, then it is clear that the rejection never would have arisen in the first place if at least one such specific disease condition had been identified in the specification. There is no requirement that this specific disease condition be set forth in the claim. Moreover, there clearly is no requirement that every disease condition that is treatable by the method of claim 2 be set forth in the claim itself, or even identified in the specification. Thus, the current and accepted state of the law is contrary to the implications raised by the Examiner's statement at page 4 of the Action, that specific utility must be demonstrated with

respect to the treatment of all diseases embraced by the claims. It is now well established that the utility requirement is met by the disclosure of a single disease condition that is treatable by the claimed method, regardless of whether the claim might also encompass other, unnamed disease conditions.

The Examiner apparently acknowledges that the specification is enabling with respect to the treatment of *at least one* specific disease condition, that is, the treatment of cancer. Thus, the focal point of Example 8 of the Training Materials is met by the present specification and claims, and there can be no question but that all aspects of the utility requirements of sections 101 and 112, first paragraph, are met by present claims 13-17.

Moreover, it is respectfully submitted that if the specification must identify and enable *all* diseases treatable by the claimed method, *there is no way* that a claim in the format of sample claim 2 could be allowable, even though this format is is *expressly authorized* in the Training Materials. Obviously, this was not the intent of the PTO in promulgating these training materials.

Specifically, sample claim 2 of Training Material Example 8 is directed to a

> "method of treating a disease caused or exacerbated by increased activity of enzyme XYZ consisting of administering an effective amount of compound A to a patient,"

just as, for example, present claim 16 is directed toward a

> method for treating a disease or medical condition mediated in whole or in part by CDK2, which method comprises administering to a warm blooded animal in need thereof a CDK2 inhibitory effective amount of a compound of the formula (I) as claimed in any one of claims 1 – 8, or a pharmaceutically acceptable salt or *in vivo* hydrolysable ester thereof.

As with enzyme XYZ of sample claim 2, CDK2 is a well known enzyme implicated in proliferative disease conditions. As noted above, specific disease conditions treatable by the method of claim 16 are also identified in the specification. In the Training Materials, it was sufficient that a specific disease condition treatable by enzyme XYZ was disclosed in the literature, even though not disclosed in the specification. Certainly the present specification and new method claims meet the requirements of the Guidelines.

Moveover, there is no way that every disease "caused or exacerbated by increased activity of enzyme XYZ" could possibly be disclosed or enabled in *any* specification supporting sample claim 2. Certainly such a requirement could not have been an expectation of the PTO when it approvingly exemplified claims in the format of sample claim 2. Thus, the implication in the present Action that the specification must identify and enable every disease or medical condition that can be treated by the method of these claims, is an unrealistic requirement, and entirely inconsistent with the PTO exemplification that this format of method claim is acceptable.

Furthermore, claims in the format of claims 13-17 have been frequently allowed in the past. See, for example, the following very recent patents issued through the Primary Examiner on this application, which have claims very similar to present claims 13-17:

US Patent No. 6,479,492 (November 12, 2002)

> 7. A method for treating inflammation in a mammalian patient which inflammation is mediated by VLA-4, which method comprises administering to said patient a pharmaceutical composition according to claim 6.

US Patent No. 6,476,029 (November 5, 2002)

> 7. A method of treating a disease or condition mediated by a cGMP-metabolizing phosphodiesterase, comprising administering to a mammal an effective amount of a compound of claim 1.

US Patent No. 6,465,495 (October 15, 2002)

> 7. A pharmaceutical composition for inhibiting a protein-protein interaction mediated by a SH2 domain or a tyrosine phosphatase in a mammal, comprising a therapeutically effective amount of a compound represented by the formula (Formula I): [structure omitted] in which [moiety definitions omitted].

US Patent No. 6,455,522 (September 24, 2002)

> 22. A method of treating a condition or disease mediated by MMPs, TNF, aggrecanase, or a combination thereof in a mammal, comprising: administering to the mammal in need of such treatment a therapeutically effective amount of a compound of claim 2 or a pharmaceutically acceptable salt form thereof.

US Patent No. 6,436,927 (August 20, 2002)

> 9. A method of treating a chemokine mediated disease in a mammal in need thereof, wherein the chemokine binds to an IL-8 α or β receptor, which method comprises administering to said mammal an effective amount of a compound according to claim 1.

US Patent No. *6,403,595* (June 11, 2002)

> 19. A method for inhibiting activated coagulation factor X in a mammal which comprises administering to said mammal an effective amount of the compound as claimed in claim 1 or a salt thereof.

These are only a few recent examples of similar types of claims which have issued from the Examiner's Group over a period of many years. While the undersigned recognizes that positions taken in another application are not necessarily relevant to the present application,

the implications of the Examiner's comments in the present Action depart from a long history of accepted PTO practice.

In view of the above discussion of the Guidelines, it is submitted that new method claims 13-17 are in a proper and sanctioned format, and that the specification and these claims meet all requirements of 35 U.S.C. § 112. Accordingly, entry and allowance of these claims is respectfully requested.

Information Disclosure Statement

The Examiner's attention is called to the Information Disclosure Statement filed in this application on August 16, 2002, including a form PTO-1449 and a copy of the recited documents. The Information Disclosure Statement also included a listing of possibly related applications and a copy of the published PCT application corresponding to each listed application.

Submitted herewith is a further Information Disclosure Statement containing a table which supplements the previously submitted list of possibly related applications. Copies of the published PCT applications corresponding thereto were already listed on the form PTO-1449 dated August 16, 2002, and a copy of each published PCT application was previously provided therewith. Applicant has noted an error on the August 16, 2002 form PTO-1449, wherein WO 99/41253 was erroneously listed as WO 00/42153. The correct WO 99/41253 is cited on the form PTO-1449 accompanying the further Information Disclosure Statement submitted herewith, and a copy of the correct document is provided.

It is respectfully requested that the previously filed Information Disclosure Statement of August 16, 2002 and the further Information Disclosure Statement submitted herewith be

fully considered prior to taking further action on the merits, and that the Examiner acknowledge consideration of each listed application and cited document by initialing where appropriate and returning initialed copies to the undersigned.

Conclusion

In view of the foregoing amendments and the above remarks, it is believed that all ground for rejection have been obviated and/or overcome, and that the new method claims are of proper form and content in all respects. Accordingly, entry of the amendments and favorable consideration of all claims are respectfully requested.

Respectfully Submitted,
Morgan Lewis & Bockius LLP

Date: January 14, 2003 By: _____
Donald J. Bird
Registration No. 25,323
Tel. No.: (202) 739-5320
Fax No.: (202) 739-3001

Morgan Lewis & Bockius LLP
Customer No. **009629**
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel. No.: 202-739-3000
DJB:mk

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES

Claims 11 and 12 have been cancelled and new claims 13-17 have been added.

Claims 1-7 have amended as follows, wherein deleted material is shown by **[bold text within brackets]** and added material is shown by **bold underlined text**.

3. (Amended) A compound of formula **(I)** according to **[any of claims 1 or 2]** **claim 1** wherein Ring A is imidazo[1,2a]pyrid-3-yl;
or a pharmaceutically acceptable salt or an *in vivo* hydrolysable ester thereof.

4. (Amended) A compound of formula **(I)** according to **[any of claims 1 - 3]** **claim 1** wherein R^2 is attached to a ring carbon and is selected from fluoro, chloro, bromo, cyano, methyl, methoxy, ethylthio, 2-hydroxyethylthio or 2-dimethylaminoethylthio and m is 0-2; wherein the values of R^2 may be the same or different;
or a pharmaceutically acceptable salt or an *in vivo* hydrolysable ester thereof.

5. (Amended) A compound of formula **(I)** according to **[any of claims 1 - 4]** **claim 1** wherein R^3 is fluoro, chloro, bromo or sulphamoyl; and p is 1;
or a pharmaceutically acceptable salt or an *in vivo* hydrolysable ester thereof.

6. (Amended) A compound of formula **(I)** according to **[any of claims 1 - 5]** **claim 1** wherein R^4 is methyl, ethyl, methoxy, methylthio, acetyl, benzyloxy, mesyl, *N,N*-diethylaminoethoxy, 3-*N,N*-dimethylamino-2-hydroxypropoxy, phenoxy, *N*-methylcarbamoyl, *N,N*-dimethylcarbamoyl, *N*-(3-imidazol-1-ylpropyl)carbamoyl, *N*-[3-(2-oxo-pyrrolidin-1-yl)propyl]carbamoyl, 3,5-dioxapiperidin-1-ylsulphonyl, *N*-cyclopropylsulphamoyl, *N*-cyclopropylmethylsulphamoyl, anilinosulphonyl, *N*-pyrimidin-2-ylsulphamoyl, *N*-methylsulphamoyl, *N*-propylsulphamoyl, *N*-(2-methoxyethyl)sulphamoyl, *N*-(2-methylaminoethyl)sulphamoyl, *N*-(2-isopropylaminoethyl)sulphamoyl, *N*-(2-dimethylaminoethyl)sulphamoyl,

N-(2-diethylaminoethyl)sulphamoyl, *N*-[2-(hydroxyethylamino)ethyl]sulphamoyl, *N*-[2-(diethylaminoethyl)ethyl]sulphamoyl, *N*-(pyrrolidin-1-ylethyl)sulphamoyl, *N*-[2-(1-methylpyrrolidin-2-yl)ethyl]sulphamoyl, *N*-(2-piperidin-1-ylethyl)sulphamoyl, *N*-(2-piperazin-1-ylethyl)sulphamoyl, *N*-(2-morpholinoethyl)sulphamoyl, *N*-(2-imidazol-4-ylethyl)sulphamoyl, *N*-(3-hydroxypropyl)sulphamoyl, *N*-(2,3-dihydroxypropyl)sulphamoyl, *N*-(3-methoxypropyl)sulphamoyl, *N*-(3-aminopropyl)sulphamoyl, *N*-(3-methylaminopropyl)sulphamoyl, *N*-(3-dimethylaminopropyl)sulphamoyl, *N*-(3-diethylaminopropyl)sulphamoyl, *N*-(3-isopropylaminopropyl)sulphamoyl, *N*-(3-*t*-butoxycarbonylaminopropyl)sulphamoyl, *N*-(3-benzyloxycarbonylaminopropyl)sulphamoyl, *N*-[3-(2-oxopyrrolidin-1-yl)propyl]sulphamoyl, *N*-(3-morpholinopropyl)sulphamoyl, *N*-[3-(4-methylpiperazin-1-yl)propyl]sulphamoyl, *N*-(3-imidazol-1-ylpropyl)sulphamoyl or *N*-(5-hydroxypentyl)sulphamoyl; and q is 1;
or a pharmaceutically acceptable salt or an *in vivo* hydrolysable ester thereof.

7. (Amended) A compound of formula **(I)** according to **[any of claims 1 - 6]** **claim 1** wherein Ring B is phenyl;
or a pharmaceutically acceptable salt or an *in vivo* hydrolysable ester thereof.

REVISED INTERIM UTILITY GUIDELINES TRAINING MATERIALS

Contents

Example 8: "Therapeutics" Not Associated with a Disease

Specification: Compound A is disclosed to inhibit enzyme XYZ, a well-known enzyme which is a member of the family of tyrosine kinases, *in vitro*. The specification states that compound A can be used to treat diseases caused or exacerbated by increased activity of enzyme XYZ. No actual diseases are named.

Claims:

1. Compound A.

2. A method of treating a disease caused or exacerbated by increased activity of enzyme XYZ consisting of administering an effective amount of compound A to a patient.

Analysis: The following analysis includes the questions that need to be asked according to the guidelines and the answers to those questions based on the above facts:

1) Based on the record, is there a "well established utility" for the claimed invention? With respect to claim 2, since the claim is directed to a specific method of use, the utility of this claim is limited to that use and the examiner should not look to a "well established utility" for the composition used in the claimed method. Consequently, the answer to the question is no for claim 2. With respect to claim 1, the answer is different. Enzymes catalyze certain reactions involving the enzyme substrate. Here, since enzyme XYZ is a well-known tyrosine kinase, the substrate for the enzyme and the reaction which the enzyme catalyzes must also be well known.

Since all of this is well known it is reasonable to infer that an inhibitor of enzyme XYZ, such as compound A, would have a "well-established utility" in controlling the enzyme/substrate interaction in the known reaction. Therefore, compound A has a "well established utility", no rejection under 35 U.S.C. § 101 should be made against claim 1, and there is no need to go further in the analysis with respect to claim 1.

2) Has the applicant made any assertion of utility for the specifically claimed invention? The answer is yes. Claim 2 has the asserted utility of treating a disease caused or exacerbated by increased activity of enzyme XYZ.

3) Is the asserted utility specific? In this case, the specification teaches that the claimed compound inhibits a particular enzyme (XYZ). Therefore, compound A has properties and uses that are not applicable to a general class of compounds. Therefore, the answer is that the invention of claim 2 has a specific utility.

4) Is the asserted utility substantial? Since neither the specification nor the art of record disclose any diseases or conditions caused or exacerbated by enzyme XYZ, the asserted utility in this case essentially is a method of treating an unspecified, undisclosed disease or condition, which does not define a "real world" context of use. Treating an unspecified, undisclosed disease or condition would require or constitute carrying out further research to identify or reasonably confirm a "real world" context of use. Therefore, the answer to this question is no with respect to claim 2.

Therefore no rejection under 35 U.S.C. § 101 should be made against claim 1 but both a 35 U.S.C. § 101, as well as 35 U.S.C. § 112, first paragraph, utility rejection should be made against claim 2.

Once the rejection has been made with respect to claim 2, the applicant bears the burden of rebutting it. Upon receiving applicant's response, the examiner should review the original disclosure, any evidence relied upon in establishing the utility rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112, first paragraph, any amendments and any new reasoning or evidence provided by the applicant in support of the asserted utility.

The following situations are most probable:

(1) Applicant provides a reference, published before the filing date of the application, which teaches that certain diseases are associated with increased activity of enzyme XYZ. In this case the examiner should withdraw the utility rejections under 35 U.S.C. § 101 and 35 U.S.C. § 112, first paragraph, for claim 2.

(2) Applicant submits an opinion declaration under 37 C.F.R. 1.132 by a qualified person of skill in the art which states that specific disease conditions are known to the skilled artisan to be either caused or exacerbated by increased activity of enzyme XYZ. The declarant identifies specific diseases and/or conditions. After reviewing the record in its entirety, the Examiner should only maintain this rejection if evidence of more probative value than the declaration exists which establishes a basis for doubting the objective truth of the declaration. Unsupported scientific reasoning is not more probative than the declaration. If the examiner maintains the rejection,

the examiner must provide documentation on the record which establishes the basis of doubting the statements made in the declaration.

(3) Applicant submits a declaration under 37 C.F.R. 1.132 which contains a factual showing that compound A is effective in alleviating the symptoms of peptic ulcers. The declaration also contains a factual showing that peptic ulcers are exacerbated by increased activity of enzyme XYZ. The facts are adequate to show that as of the date for which priority was sought, compound A was known to be effective in alleviating the symptoms of peptic ulcers. The rejection under 35 U.S.C. 101 and 112 would be withdrawn.